

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1–10 (Cancelled)

11. (Cancelled)

12. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic member contains less than about 200 ppm of sodium.

13. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic member contains less than about 1,500 ppm of silica.

14. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic component is fashioned in the shape of a resonator support used in a cell phone base station.

15. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic component is fashioned in the shape of a vacuum chamber cover.

16. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic component is fashioned in the shape of a semiconductor manufacturing part.

17. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the grinding with the media deagglomerates and reduces particle size of the aluminum oxide particles.

18. (Previously Presented) A ceramic member as in claim 17, wherein the aluminum oxide particles have a mean particle size in the range from about 0.5 microns to about 4 microns after the grinding.

19. (Currently Amended) A ceramic member as in claim [[11]] 26, wherein the ceramic component is formed by:

placing the aluminum oxide particles into a slurry;
adding a low sodium grade binder to the slurry;
drying the slurry to form a powder; and
forming the powder into a certain shape and producing the ceramic component.

20. (Previously Presented) The ceramic member as in claim 19, wherein the low sodium grade binder comprises polyethylene glycol.

21. (Previously Presented) The ceramic member as in claim 19, wherein the drying of the slurry comprises spray drying the slurry.

22. (Previously Presented) The ceramic member as in claim 19, wherein the producing of the ceramic component comprises thermally treating the formed powder.

23. (Previously Presented) The ceramic member as in claim 20, wherein the thermal treatment comprises heating the formed powder to a temperature in the range from about 1580°C to about 1670°C for about 2 to about 10 hours.

24. (Currently Amended) The ceramic member as in claim [[11]] 26, wherein the ceramic component has a dielectric loss value that is less than about 5×10^{-5} .

25. (Cancelled)

26. (New) A ceramic member, comprising:
a ceramic component comprising aluminum oxide, wherein the aluminum oxide comes from aluminum oxide particles made by:

digesting bauxite in a solution of sodium hydroxide;
precipitating an aluminum hydroxide precipitate from the sodium hydroxide solution, and washing the precipitate; and

calcining the aluminum hydroxide precipitate to form the aluminum oxide particles,

wherein the aluminum oxide particles comprise less than about 100 parts per million sodium, and less than about 600 parts per million silica.

27. (New) The ceramic member as in claim 26, wherein the aluminum hydroxide precipitate is calcined at about 1200°C.

28. (New) The ceramic member as in claim 26, wherein the aluminum oxide has a purity of about 99.8% or greater.